

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (*Currently Amended*) A method for echo cancelling in a communication line system, the method comprising:

measuring an output transmission voltage and an input transmission voltage of a hybrid to determine a transmission return loss gain in said hybrid, wherein said hybrid comprises a bridge with two branches, each branch comprising at least one tunable balance element; and
tuning said ~~adapting~~ tunable balance elements to be substantially equal to a scaled impedance value of a parallel circuit comprising the line termination resistance in transmission paths of the hybrid bridge and the line impedance~~passive elements of said hybrid which forms part of the analog front end of said communications line system,~~ wherein said tunable balance elements whereby the values of the tunable~~passive elements~~ are controlled by digital control means to reduce the transmission return loss gain.

2. (*Currently Amended*) The method according to claim 1, wherein a scaling factor is used for adjusting said tunable balance~~passive elements~~.

3. (*Currently Amended*) The method according to claim 1, wherein when the transmission return loss gain differs from zero, the digital control means adjusts said the tunable balance ~~passive~~ elements until a zero value of said transmission return loss gain is obtained.

4. (*Cancelled*).

5. (*Currently Amended*) The method according to claim 1[[4]], wherein said hybrid comprises a current to voltage converter, the feedback impedances of which being adjusted so as to be equal to said tunable balance elements~~impedance~~.

6. (*Currently Amended*) A device for echo cancelling in a communication line system, comprising:

a hybrid comprising a bridge with two branches, each branch comprising a tunable balance element, wherein said balance elements are tuned to be substantially equal to a scaled impedance value of a parallel circuit comprising the line termination resistance in transmission paths of the hybrid bridge and the line impedance~~tunable passive elements~~; and

digital control means coupled to said hybrid, said digital control means controlling the values of said tunable balance ~~passive~~ elements to reduce a transmission return loss gain in said hybrid, ~~said transmission return loss gain being based upon an output transmission voltage from said hybrid and an input transmission voltage to said hybrid.~~

7. (*Currently Amended*) The device according to claim 6, wherein said tunable balance ~~passive~~ elements of said hybrid are scalable by a predetermined scaling factor.

8. (*Previously Presented*) The device according to claim 6, wherein said hybrid comprises a current to voltage converter.

9. (*Currently Amended*) The device according to claim 8, wherein each branch of said hybrid bridge further comprises ~~comprising two branches, each comprising a tunable balance impedance in series with a second tunable impedance in series with said tunable balance element.~~

10. (*Currently Amended*) The device according to claim ~~6~~[[9]], wherein said tunable balance element ~~impedance~~ comprises a first tunable resistor, in parallel with a series connection of a second tunable resistor and a tunable capacitor, and in parallel with a fixed value resistor.

11. (*Previously Presented*) The device according to claim 10, wherein said fixed value resistor has the same resistance value, as the line termination resistors in the transmission paths of the hybrid bridge, scaled with a scaling factor.

12. (*Currently Amended*) The device according to claim 9, wherein said ~~second~~-tunable impedance in each branch comprises a resistor in series with a tunable capacitor, the value of said resistor being the same as the resistance value of said line termination resistors in the transmission paths of the hybrid bridge, scaled with a scaling factor.

13. (*Currently Amended*) The device according to claim 8, wherein said current to voltage converter comprises an operational amplifier with tunable feedback impedances having the same impedance values as said tunable balance element~~impedance~~.

14. (*Previously Presented*) The device according to claim 6, wherein said digital control means comprises a microprocessor.

15. (*Currently Amended*) The device according to claim 9, wherein said tunable balance ~~passive~~-elements are part of an integrated circuit.

16. (*New*) The method according to claim 1, wherein said transmission return loss gain is based upon an output transmission voltage from said hybrid and an input transmission voltage to said hybrid.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. APPLN. NO. 09/729,177
ATTORNEY DOCKET NO. Q61789

17. (*New*) The device according to claim 6, wherein said transmission return loss gain is based upon an output transmission voltage from said hybrid and an input transmission voltage to said hybrid.